SPECIAL ISSUE

PRECAMBRIAN METALLOGENY RELATED TO PLATE TECTONICS

Edited by

G. GAÁL[a] and K.J. SCHULZ[b]
[a]*Hungarian Geological Survey, Stefania út 14, P.O. Box 106, H-1143 Budapest, Hungary*
[b]*U.S.G.S., Eastern Mineral Resources, MS 954, Reston, VA 22092, USA*

IGCP Project 247

CONTENTS

Preface vii

Archaean Metallogeny

Mineral deposits in the Archean Slave Structural Province; lithological and tectonic setting
W.A. Padgham (Yellowknife, N.W.T., Canada) 1
Archean tectonic and metallogenic evolution of the Superior Province of the Canadian Shield
K.H. Poulsen, K.D. Card and J.M. Franklin (Ottawa, Ont., Canada) 25

Metallogeny of Archaean–Proterozoic Boundaries

The Mount Bruce Megasequence Set and eastern Yilgarn Craton: examples of Late Archaean to Early Proterozoic divergent and convergent craton margins and controls on mineralization
M.E. Barley, T.S. Blake and D.I. Groves (Nedlands, W.A., Australia) 55
Early Proterozoic metallogeny, tectonics and geochronology of the Singhbhum Cu–U Belt, eastern India
D.S. Bhattacharyya (Kharagpur, India) 71
Proterozoic mineral deposits near plate margins of the Archean Wyoming Province, USA
R.S. Houston (Laramie, WY, USA) 85
Early Proterozoic tectonics and metallogeny of the Lake Huron region of the Canadian Shield
S.M. Roscoe and K.D. Card (Ottawa, Ont., Canada) 99
Precambrian metallogeny related to tectonics in the eastern part of the Baltic Shield
S.I. Turchenko (St. Petersburg, Russia) 121
Metallogeny and tectonic evolution of the Early Proterozoic Skellefte district, northern Sweden
P. Weihed (Göteborg, Sweden), J. Bergman (Uppsala, Sweden) and U. Bergström (Göteborg, Sweden) 143

Proterozoic Metallogeny

The tectono-metallogenic evolution of the Arabian Shield
R.A. Agar (Perth, W.A., Australia) 169
Proterozoic C-type eclogites hosting unusual Ti–Fe ± Cr ± Cu mineralization in northeastern Brazil
H. Beurlen, A.F. Da Silva Filho, I.P. Guimarães and S.B. Brito (Recife, Brazil) 195
Late Proterozoic thrust tectonics, high-pressure metamorphism and uranium mineralization in the Domes Area, Lufilian Arc, northwestern Zambia
M. Cosi, A. De Bonis, G. Gosso (Milano, Italy), J. Hunziker (Lausanne, Switzerland), G. Martinotti (Torino, Italy), S. Moratto (Milano, Italy), J.P. Robert and F. Ruhlman (Paris, France) 215
Geological characteristics and tectonic setting of Proterozoic iron oxide (Cu–U–Au–REE) deposits
M.W. Hitzman (Dublin, Ireland), N. Oreskes (Hanover, NH, USA) and M.T. Einaudi (Stanford, CA, USA) 241
Deep structure and metallogeny of Early Proterozoic mobile belts in the light of superdeep drilling in Russia
V.I. Kazansky (Moscow, Russia) 289
Early Proterozoic ore deposits and tectonics of the Birimian orogenic belt, West Africa
J.P. Milési, P. Ledru, J.-L. Feybesse, A. Dommanget and E. Marcoux (Orléans, France) 305
Proterozoic tectonic framework and metal deposits of southwestern Australia
J.S. Myers (Perth, W.A., Australia) and M.E. Barley (Nedlands, W.A., Australia) 345
Metallogeny of the Midcontinent rift system of North America
S.W. Nicholson, W.F. Cannon and K.J. Schulz (Reston, VA, USA) 355
Early Proterozoic Au–Co–U mineralization in the Kuusamo district, northeastern Finland
H.S. Pankka (Houghton, MI, USA) and E.J. Vanhanen (Rovaniemi, Finland) 387
Metallogeny of structural zones, Grenville Province, northeastern North America
A.L. Sangster (Ottawa, Ont., Canada), M. Gauthier (Montréal, Que., Canada) and C.F. Gower (St. John's, Nfld., Canada) 401

Precambrian Ophiolites

Precambrian ophiolite belts of southern Siberia, Russia, and their metallogeny
N.L. Dobretsov (Novosibirsk, Russia), E.G. Konnikov (Ulan-Ude, Russia) and N.N. Dobretsov (Novosibirsk, Russia) 427